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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/607,162
	Filing Date	June 29, 2000
	First Named Inventor	Thomas B. Hall
	Art Unit	2672
	Examiner Name	Harrison, Chante E.
	Attorney Docket Number	21301.2
Total Number of Pages in This Submission		38

ENCLOSURES (Check all that apply)		
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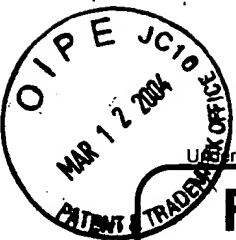
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual	Maria M. Eliseeva
Signature	<i>Maria Eliseeva</i>
Date	March 8, 2004

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FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 905.00

Complete if Known

Application Number 09/607,162

Filing Date June 29, 2000

First Named Inventor Thomas B. Hall

Examiner Name Harrison, Chante E.

Art Unit 2672

Attorney Docket No. 21301.0002

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METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit
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Deposit
Account
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502233

Houston Eliseeva LLP

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments

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FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
SUBTOTAL (1)					(\$)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Extra Claims		Fee from below		Fee Paid
Total Claims		-20** =		X		
Independent Claims		-3** =		X		
Multiple Dependent						

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1202	18	2202	9	Claims in excess of 20	
1201	86	2201	43	Independent claims in excess of 3	
1203	290	2203	145	Multiple dependent claim, if not paid	
1204	86	2204	43	** Reissue independent claims over original patent	
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)					(\$)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	740.00
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	165.00
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) 905.00

SUBMITTED BY

Name (Print/Type)	Maria M. Eliseeva	Registration No. (Attorney/Agent)	43,328	Telephone	781-863-9991
Signature	Maria Eliseeva	Date	March 8, 2004		

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14/ Brief
3/1/04

108

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re: Thomas B. Hall and Walter Burt
Serial No: 09/607,162
Filed: June 29, 2000
For: System and Method for Transmitting
Interactive Synchronized Graphics

Confirmation No: 3955
Group: 2672
Examiner: Harrison, Chante
E.

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APPELLANTS' BRIEF

Mail Stop Appeal Brief- Patents
Assistant Commissioner for Patents
P.O. Box 1450,
Alexandria, Virginia 22313-1450

Sir:

This is the Applicants' appeal from the final Office Action, mailed April 30, 2003,
(Paper No. 12).

A four month extension of time is requested for this response.

Real Party of Interest

Musicnotes, Inc., the assignee of the present application, is the real party in
interest.

Related Appeals and Interferences

There are no related appeals or interferences.

Status of Claims

Claims 1-20 are pending in this application. Claims 1-20 stand finally rejected
pursuant to the outstanding Office Action.

Status of Amendments

All amendments have been entered. There were no post final amendments or
proposed amendments.

03/15/2004 SFELEKE1 00000156 502233 09607162

02 FC:2254 740.00 DA

03/15/2004 SFELEKE1 00000156 502233 09607162

01 FC:2402 165.00 DA

Summary of the Invention

Issues

1. Whether Claims 1-4, 6, and 12 are anticipated under 35 U.S.C. 102(e) by Cave, U.S. Patent 4,841,438.
2. Whether Claims 5, 7-10, and 14-16 are obvious under 35 U.S.C. 103(a) over Cave as applied to Claim 1 in view of Kennedy.
3. Whether Claims 17-20 are obvious under 35 U.S.C. 103(a) over Cave in view of Eller.

Grouping of Claims

Claims 1-20 stand or fall separately.

Argument

1. With regard to Claims 1-4, 6, 11 and 12, which stand finally rejected under 35 USC 102(e) over Cave, Cave is conceptually different from the present invention and cannot anticipate the relevant Claims.

Specifically, in its Response to Arguments, the Patent Office asserts that (1) since “Cave teaches multimedia data comprising sound, music, text, graphics and video (Fig. 2A)”, it somehow means that Cave teaches “logically separating the data into graphical data and multimedia data”, as claimed in Claim 1 and Claim 11. Also, on page 3 of the Office Action the Patent Office writes that (2) “Cave discloses separating data into graphical and multimedia data (FIG. 2A)...” Applicant asserts that these arguments are without merit. With regard to (1), it is impossible to see how simply teaching multimedia data also teaches logically separating the data into two data subsets. In fact, Cave doesn’t teach that. With regard to (2), examination of FIG. 2A doesn’t reveal how it teaches logical separation of data into graphical data and multimedia data. As described in Cave, in FIG.

2A “each playback icon 205 represents a corresponding media object to be played within a time window indicated by the left and right extremities of the icon 205 as located on the x-axis of playback grid 203.” (Col. 6, lines 22-26). Further Cave describes “[T]his constraint is shown as pipe 255, where parallel lines perpendicular to the x-axis represent the bandwidth available in a connection through which the designer wishes to deliver the media objects scripted in corresponding playback score 201 (as illustrated in FIG. 2A)” (Col. 8, lines 16-21). FIG. 2A shows the bandwidth corresponding to each object in a playback score, which is understandable: different objects in a playback score most probably require different bandwidth. Since Cave describes a visual aid for bandwidth allocation, that visual aid tool in FIG. 2A illustrates bandwidth requirements for different objects, all of which are contained in a playback score. Nothing in FIG. 2A, as well as in the whole disclosure of Cave, discloses that the graphical data and the multimedia data are logically separated, as claimed in Claim 1 and Claim 11 of the present invention. Therefore, the Patent Office is incorrect in its assertion that Cave discloses separating data into graphical and multimedia data.

Furthermore, it is Applicant’s strong assertion that the Cave patent doesn’t have anything to do with the bounding box feature claimed in Claim 1 and Claim 11. Although words in a claim are generally given their ordinary and customary meaning, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.¹ To that end, it is also noted that during ex parte prosecution, claims are to be given their broadest reasonable interpretation consistent with the description of the invention in the specification.²

The term “bounding box” is coined by Applicant. It is neither a generic dictionary word nor a term known in the relevant industry. The task of transmitting a musical score (such as digitized sheet music) in the form of an interactive logically separated compact file has

¹ Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1576 (Fed. Cir. 1996).

² In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

not had a known solution before the Applicant's present invention, so in order to describe and claim the invention, Applicant had to coin that term. A definition of this coined term is clearly stated in the specification. "Although the bounding boxes are not explicitly shown on the screen when a piece of music is displayed, they are implicitly present in the representation of music" (page 3, lines 15-17), meaning that the coined term "bounding box" describes an object invisible (not displayed) to a user. Contrary to the meaning of that coined term, Cave discloses a visual aid, an icon, for bandwidth allocation. Cave's icons are not bounding boxes. Therefore, Cave cannot disclose the structure of bounding boxes as claimed in Claim 1 and Claim 11.

The Patent Office argues in its Office Action that "Cave also discloses each track being a path through the hierarchical structure because each track is executed during runtime to demonstrate a multimedia presentation." How executing each track during the run times in Cave makes this track structure hierarchical is hard to see. The dictionary definition of the word "hierarchy" in the Merriam-Webster dictionary online is given as "a graded or ranked series" (a copy is enclosed with this brief). Cave describes a "[S]cript embodied by playback score 201 on FIG. 2A. Looking at FIG. 2C, download icons 257 show when to start delivering individual media objects and at what speed..." (Col. 8, lines 4-7). Similarly, in Col. 6, lines 23-27 Cave states that "[E]ach playback icon 205 represents a corresponding media object to be played within a time window indicated by left and right extremities of the icon 205 as located on the x-axis of playback grid 203." What Cave talks about is visualization of sequential ordering of the playback, in other words visualizing the timing of bandwidth allocation according to when a certain object should be played. In the present invention, while the display of the areas of a musical score corresponding to the structure of bounding boxes is synchronized, a hierarchical nature of the structure of bounding boxes in the present invention is not even visualized and is not a temporal concept. The hierarchy of bounding boxes of the present invention claimed in Claim 1 and Claim 11 ranks from the largest to the smallest (page 10, second paragraph), consistent with the recited dictionary definition. The hierarchical structure of the bounding boxes lies in their ranking between level 1 and level 6, not in when a particular area of a musical score corresponding to a bounding box is displayed to a user. Therefore,

Cave shows no hierarchical structure and cannot anticipate Applicant's Claim 1 and Claim 11.

Furthermore, Claim 1 recites "a hierarchical structure of bounding boxes serving to synchronize displayed graphical data..." Cave does not disclose displayed graphical data. As follows from FIG. 2A, Cave teaches to visualize allocation of the bandwidth necessary to schedule the delivery of a graphical object within varying constraints of available bandwidth, which has nothing to do with actually displaying graphical data using a hierarchical structure of bounding boxes and claims in Claim 1.

With regard to Claim 3, the Patent Office is incorrect in asserting that Cave discloses a musical score. A dictionary definition of a musical score says that it is "a written form of a musical composition, parts for different instruments appear on separate staves on large pages; 'he studied the score of the sonata'." (copy enclosed)³. What Cave teaches is a tool used to visualize bandwidth allocation for delivery of media objects. In the abstract Cave says that a system designed who will use its tool orchestrates the playback of a series of media objects represented as a playback icons on a playback "score" analogous to a musical score. Which is exactly the point: Cave icons represent visual bandwidth allocation for different objects, they do not represent a musical score of a musical piece with notes and staves and clefs. A musical score is an analogy Cave makes to explain what his abstract bandwidth allocation icons do, but the playback score in Cave has nothing to do with defining a musical score, as claimed in Claim 3.

Claims 2-4 and 6 depend off independent Claim 1 and cannot be anticipated by Cave.
Claim 12 depends off independent Claim 11 and cannot be anticipated by Cave.

2/3. Claims 5, 7-10, and 14-16 cannot be obvious under 35 U.S.C. 103(a) over Cave as applied to Claim 1 in view of Kennedy, since the prima facie case of obviousness

³ The undersigned attorney has a degree in music received after 8 years of music school training as a concert pianist. It is universally known that a musical score is a representation of a musical piece with notes, staves, clefs and other music notation.

has not been made by the Patent Office. Claims 17-20 cannot be obvious under 35 U.S.C. 103(a) over Cave in view of Eller.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the reference (or references when combined) must teach or suggest all the claim limitations⁴.

With regard to independent Claims 7, 14 and 17, all the arguments presented by Applicant in support of patentability of Claim 1 are repeated here in their entirety. Cave doesn't disclose hierarchical structure of bounding boxes, as well as logical separation of the data into a graphical and multimedia data subsets. Kennedy doesn't disclose such elements either, so neither of the patents themselves or combined teaches or suggest Claims 7, 17 and 14. Nor is there any motivation to combine with a reasonable expectation of success. Applicant therefore asserts that Claims 7, 17 and 14 are patentable. Claims 8-10 depend off Claim 7 and are therefore patentable. Claims 15-16 depend off Claim 14 and are therefore patentable. Claims 18-20 depend off Claim 17 and are therefore patentable.

Respectfully submitted,

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Date: March 8, 2004

⁴ MPEP 2142-2143

Appendix

1. (original) A computer implemented method for providing compact representation of data, the method comprising:

logically separating the data into graphical data and multimedia data; and providing at least three sequencing schemes within the multimedia data by:

providing a first sequencing scheme comprising a hierarchical structure of bounding boxes serving to synchronize displayed graphical data with a series of time ordered events;

providing a second sequencing scheme comprising a sequence map containing one or more tracks, each track being a path through the hierarchical structure of bounding boxes; and

providing a third sequencing scheme comprising at least one time map defining the series of time ordered events.

2. (original) The method of Claim 1, wherein the graphical data are a musical notation, and wherein the series of time ordered events correspond to a musical performance.

3. (original) The method of Claim 1, wherein the hierarchical structure of bounding boxes is defined for a musical score.

4. (original) The method of Claim 2, wherein providing the third sequencing scheme comprises providing a plurality of time maps corresponding to a plurality of musical performances.

5. (original) The method of Claim 1, wherein providing the three sequencing schemes is done server-side before transmitting the data to a user.

6. (original) The method of Claim 1, further comprising providing a single bit for each track defined in the sequence map, each single bit for each track indicating whether a bounding box is associated with a time event.
7. (original) A system for compressing data, the system comprising:
 - a server storing the data, the data having graphical data logically separate from a multimedia data;
 - the multimedia data comprising a plurality of data subsets; and
 - the data subsets comprising:
 - a plurality of bounding boxes, the bounding boxes having a hierarchical structure;
 - a sequence map containing one or more tracks, each track corresponding to a sequence of the bounding boxes; and
 - a time map synchronizing the sequence map with an audio or video recording.
8. (original) The system of Claim 7, further comprising a display for visualizing graphical data and multimedia data.
9. (original) The system of Claim 7, wherein one or more bounding box of the plurality of bounding boxes is tagged with information which can be added or removed and which is displayed in response to a user's request.
10. (original) The system of Claim 7, wherein the plurality of bounding boxes defines locations of the graphical data on the display.
11. (original) A computer implemented method of providing interactive graphics via a computer network, the method comprising:
 - providing logically separate graphical data and multimedia data sections corresponding to the interactive graphics;

providing a hierarchical set of bounding boxes within the multimedia data section;
and

utilizing a hierarchy of bounding boxes to facilitate positioning and zoom of the displayed interactive graphics in response to a user's input.

12. (original) The method of Claim 11, further comprising utilizing the hierarchy of bounding boxes to facilitate hi-lighting of the displayed interactive graphics according the user's input.

13. (original) The Method of Claim 12, further comprising hi-lighting of the displayed interactive graphics in synchronization to an external performance.

14. (original) A system for providing interactive graphics, the system comprising:
a server containing graphical data and multimedia data corresponding to the interactive graphics; and

a hierarchical set of bounding boxes within the multimedia data, the bounding boxes facilitating positioning and zoom of the displayed interactive graphics and hi-lighting the displayed interactive graphics in response to a user's input, and hi-lighting the displayed interactive graphics in synchronization to an external performance.

15. (original) The system of Claim 14, further comprising a computer network allowing the user to download the interactive graphics from the server.

16. (original) The system of Claim 14, wherein the interactive graphics is sheet music and wherein the external performance is a musical performance.

17. (original) A method of compressing graphical data, the method comprising:
providing a server storing the graphical data;
providing a hierarchical structure of bounding boxes controlling display of the graphical data on a viewing device; and

utilizing contiguity and hierarchy of the bounding boxes to eliminate repetitive encoding of contiguous elements of bounding boxes, thereby reducing the number of bytes used to represent the graphical data and providing compressed graphical data.

18. (original) The method of Claim 17, further comprising defining a position of a subsequent bounding box on the viewing device in terms of an offset from a previous bounding box.

19. (original) The method of Claim 17, further comprising transmitting the compressed graphical data via a computer network between the server and a user.

20. (original) The method of Claim 17, further comprising facilitating the user's interaction with the graphical data by programming the viewing device to be able to determine hierarchical relationships of all bounding boxes in the hierarchical structure.